

- 12 -

CLAIMS

1. A method for the cryopreservation of oocytes or embryos, which comprises centrifugation of oocytes or embryos to polarise cytoplasmic lipid outside the oocyte or embryonic cells, subjecting the oocytes or embryos to low temperature conditions in the presence of a cryoprotectant which results in freezing of the oocytes or embryos prior to lipid depolarisation, followed by low temperature storage of the frozen lipid polarised oocytes or embryos.
2. A method according to claim 1 wherein the embryos are zona intact embryos.
3. A method according to claim 1 wherein oocytes and embryos are obtained from companion animals (for example dogs and cats), and domestic/livestock animals (for example horses, cows, sheep, goats, llamas and alpacas).
4. A method according to claim 3 wherein the oocytes and embryos are porcine oocytes and embryos.
5. A method according to claim 1 wherein the embryos are vitrified in the presence of a solution containing one or more cryoprotectant agents.
6. A method according to claim 2 wherein the cryoprotectants are selected from dimethylsulfoxide, propylene glycol, ethylene glycol, glycerol, PVP, sucrose, trehalose, Ficoll, acetamide and egg yolk.
7. A method for producing live animals from embryos which comprises thawing a cryopreserved zona intact embryo produced according to claim 1 and thereafter introducing the embryo into the uterus or fallopian tubes of a pregnancy competent female pig which at the conclusion of pregnancy term gives rise to live piglets.
8. An animal produced from a cryopreserved oocyte or embryo produced according to claim 1.

- 13 -

9. An animal produced according to the method of claim 7.
10. An animal according to claim 7 which is a pig.
- 5 11. A cryopreserved oocyte or embryo when produced according to claim 1.
12. A method according to claim 3 wherein embryos are vitrified by freezing in liquid nitrogen.
- 10 13. A method according to claim 10 wherein oocytes or embryos are frozen in a freezing vessel including cryologic vials or freezing straws including open pulled straws in which the oocytes or embryos are located by capillary action.
- 15 14. A method according to claim 2 wherein the embryos are in the morulae to mid-blastocyst stage.